

### REMARKS

The office action of May 22, 2002 has been carefully reviewed and these remarks are responsive thereto. Reconsideration and allowance of the instant application are respectfully requested. Claims 8 and 16-18 are pending. Claim 1 has been canceled without prejudice or disclaimer and new claims 16-18 have been added. Claims 2-7 and 9-15 have been canceled without prejudice or disclaimer as being drawn to non-elected invention(s).

Claims 1 and 8 stand objected to for informalities and/or defects. These informalities have been addressed in the amendment to claim 8 and in new claims 16-18. Withdrawal of this objection is requested.

Claim 8 stands rejected under 35 U.S.C. § 112, first paragraph, as being based on a disclosure which is not enabling. Claim 8 has been amended and new claims 16 and 18 have been added to recite semiconductor devices fully enabled by the specification. Withdrawal of this rejection is requested.

Claims 1 and 8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 1 has been canceled, new independent claims 16 and 18 added, and claim 8 has been amended, to clarify the invention. Withdrawal of this rejection is requested.

Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,252,280 (Hirano). Claim 1 has been canceled and new claims 16-18 have been added. Insofar as the instant rejection applies to new claims 16-18, it is respectfully in error.

The instant claims require two sets (pairs) of device regions (active areas), which are disposed in two wells adjacent to each other with a well isolation structure disposed between each set of device regions. Hirano merely discloses a single set (pair) of device regions and thus does not teach two sets of device regions in accordance with claims 16-18. Hirano does not teach each and every element of the claimed invention as required under 35 USC 102 and withdrawal of the instant rejection is requested.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being obvious over Hirano in view of U.S. patent no. 6,091,630 (Chan et al.) Hirano does not teach or suggest the claimed invention for the reasons described above for independent claim 16. Chan does not teach or

suggest two sets of device regions in accordance with claim 16. Thus, Chan does not remedy the defects of Hirano. Withdrawal of the instant rejection is requested.

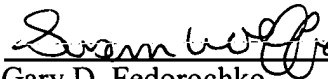
**CONCLUSION**

All rejections having been addressed, applicants respectfully submit that the instant application is in condition for allowance, and respectfully solicit prompt notification of the same.

Respectfully submitted,

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**MARKED-UP VERSION OF AMENDMENTS MADE****IN THE SPECIFICATION:**

Paragraph on page 2, lines 4-7, has been amended as follows:

In case of Fig. 89A, an  $n^+$  diffusion layer 15, which is a device region, is formed on the surface part of the p-well 13, but no device region exists in the opposite position in the n-well side. This is called an open space.

Paragraph beginning on page 2, line 36 and ending on page 3, line 7, has been amended as follows:

Figs. 12A and 12B show results of an experiment in actual formation of devices. Fig. 11A shows those of devices in which device regions are not opposed whereas Fig. ~~11~~12B shows those of devices in which device regions are opposed. This result shows that, in devices where device regions are not opposed, the withstand voltage property decreases to an unusable level when the STI width reaches 0.2  $\mu\text{m}$ , but in devices where device regions are opposed, they maintains a sufficient withstand voltage even under 0.2  $\mu\text{m}$ .

Paragraph on page 4, lines 6-9, has been amended as follows:

forming a first well of a first conductivity and ~~and~~ a second well of a second conductivity which is opposite to the first conductivity in a manner they are disposed adjacent to each other;

Paragraph on page 6, lines 20-30, has been amended as follows:

As shown in Fig. 4, device regions 15 and 16 are partly opposed, but since their opposed extensions are not sufficiently wide, tapered angle does not increase sufficiently, and well isolation distance cannot be reduced sufficiently. To compensate it, a  $p^+$  dummy region 19 is formed to extend from one side of the  $p^+$  region 16 such that the  $n^+$  region 15 is opposed with its full width. As a result, similarly to the configuration of Fig. 1, there exists a pattern of opposed device regions, and miniaturization of devices can be attained by using more miniaturized well isolation.

**MARKED-UP VERSION OF AMENDMENTS MADE**

Paragraph beginning on page 6, line 32 and ending on page 7, line 4, has been amended as follows:

If the concept of Embodiment 2 is used, opposed device regions need not be those actually used. That is, they may be dummy device regions. Fig. 5 shows an example of this concept, and a dummy pattern 20 is formed to confront the  $n^+$  region 15. Note, however, that its width has to completely include the portion opposed to the width of the  $n^+$  region 15. Therefore, if the dummy region has the width equal to the width of the  $n^+$  region 15 as illustrated with the solid line, or a wider width as illustrated with the broken line, the requirement is satisfied.

Paragraph on page 9, lines 5-14, has been amended as follows:

After that, 5 nm thick  $\text{SiO}_2$  is formed on the Si substrate by thermal oxidation of 800EC, and an ion implantation pattern is formed by photo lithography. There follows ion implantation of arsenic to  $n^+$  regions under the acceleration voltage of 35 KeV by the dose of  $2 \times 10^{14} \text{cm}^{-2}$ , and ion implantation of  $\text{BF}_2$  to  $p^+$  regions under the acceleration voltage of 10 KeV by the dose of  $2 \times 10^{14} \text{cm}^{-2}$ . Subsequently, by annealing at 1000EC for 30 seconds in  $\text{N}_2$  atmosphere, a shallow  $n^+$  layer ~~114~~113 is formed in the p-well 108 and a shallow  $p^+$  layer 114 is formed in the n-well (Fig. 8G).

**IN THE CLAIMS:**

Claims 1-7 and 9-15 have been canceled.

Claim 8 has been amended as follows:

8. (Amended) The semiconductor device according to claim ~~11~~16, wherein ~~opposed said~~ device regions act as ~~are cell patterns of static RAM cells, and a well isolation structure having a~~ narrower width than other circuit blocks is used.